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**Fragmentation Properties of Cerium and Copper M1 at Dynamic Volume Expansion** AMANGELDY ZHIEMBETOV, ANATOLY MIKHAYLOV, GEORGII SMIRNOV, Russian Federal Nuclear Center-VNIIEF — In this work, for verification of the basic aspects of the material dispersion models under shock-wave loading, dynamic strength properties of copper M1 and cerium (Ce) were evaluated by the fragmentation method during volume expansion (crack-resistance, spall strength, dynamic yield strength, specific surface energy, dynamic viscosity) with use of cylindrical HE charges (explosion) and small-scale spherical HE charges with one-point initiation (implosion). In the used experimental method, samples of studied materials were subjected to controlled shock-wave effect in the testing devices of the chosen geometry. Parameters of melting of shock-compressed cerium samples during unloading were determined by the cavitation method based on recording of change of regimes of samples destruction and fragmentation during substance transition to the other aggregative state with use of pulse X-ray recording.

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